



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,441	12/13/2000	Michael Ralph Foster	DEP-0112(DP-302738)	1875

7590 10/14/2004

DELPHI TECHNOLOGIES, INC.  
Legal Staff  
P.O. Box 5052  
Mail Code: 480-414-420  
Troy, MI 48007-5052

EXAMINER
----------

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/737,441	<b>Applicant(s)</b> FOSTER ET AL.	
	<b>Examiner</b> Hien Tran	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                      |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                 | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/4/04; 9/10/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, lines 12-14, it is unclear as to what structural limitation applicants are attempting to recite and what is intended by “comprises a straight edged comprising ...”. See claim 22 likewise.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Santiago et al (4,155,980).

With respect to claim 1, Santiago et al discloses an exhaust system component, e.g. end cone assembly comprising:

a shell 3; and

an endcone assembly comprising a conical shaped sidewall extending outwardly from an inlet end of the endcone assembly to a shoulder 7 of the endcone assembly, wherein said

Art Unit: 1764

endcone assembly is attached to said shell 3 at said shoulder 7; and a mat protection element extending from said shoulder 7, away from said sidewall, wherein said mat protection element comprises a protrusion 5 extending outwardly from said mat protection element contacting the shell 3 (col. 2, line 39 to col. 3, line 30; Figs 1, 3).

With respect to claim 2, the shoulder diameter in Santiago et al is greater than the mat protection element diameter at portion # 9 or equivalent to said mat protection element diameter at portion # 6 (Figs. 1, 3).

With respect to claims 4, 5, 6, the mat protection element in Santiago et al has a conical geometry extending inward, then outward from the shoulder and then ending with a cylindrical geometry (at portion # 4) (Fig. 3).

With respect to claims 8-9, the mat protection element in Santiago et al comprises a protrusion, e.g. rib or dimple, 9, 5, longitudinally disposed thereon (Fig. 3).

With respect to claims 10 and 15, Santiago et al further discloses a catalytic converter and a method of making the catalytic converter comprising:

- a catalyst substrate 1 comprising a catalyst;

- a shell 3 concentrically disposed around said catalyst substrate;

- a mat support material 2 disposed between said catalyst substrate and said shell, and concentrically around said catalyst substrate; and

- said endcone assembly, wherein said endcone assembly is securedly attached to said shell at said shoulder (col. 2, line 39 to col. 3, line 30; Figs 1, 3).

Art Unit: 1764

With respect to claims 11-12, 16, 19-20, the mat protection element 5 contacts at least an edge of the mat support material 2 or penetrates at least a portion of said mat support material or disposes between the shell and the substrate (Fig. 3).

With respect to claims 13-14, 17-18, note the protrusions (a first conical portion before part near #7, a second portion at # 7, a second conical portion # 9, and a third conical portion #5) in Fig. 3 of Santiago et al.

With respect to claim 21, the mat protection element in Santiago et al comprises a first portion mat protection side wall and a second portion mat protection side wall, wherein said first portion mat protection side wall 9 is concentrically disposed inwardly from and in contact with said shoulder 7, and wherein said second portion mat protection side wall 5 comprises a straight edge comprising a first end in contact with said first portion mat protection side wall 9 and a second end in contact with an edge of said mat support material 2.

With respect to claim 22, the mat protection element in Santiago et al comprises a first portion mat protection side wall, a second portion mat protection side wall, a third portion mat protection side wall and a fourth portion mat protection side wall, wherein said first portion mat protection side wall (portion before part #7) is concentrically inwardly disposed from said shoulder 7 and comprises a first portion conical shape, wherein the second portion mat protection side wall comprises a straight edge 7 comprising a first end in contact with said first portion mat protection side wall and a second end in contact with said third portion mat protection side wall, wherein said third portion mat protection side wall 9 is concentrically inwardly disposed from said second end of said second portion mat protection side wall and comprises a third portion conical shape, and wherein said fourth portion mat protection side wall 5 is in contact with said

third portion mat protection side wall and is in contact with a portion of said mat support material 2.

Instant claims 1-22 structurally read on the apparatus and method of Santiago et al.

***Response to Arguments***

5. Applicant's arguments filed 7/30/04 have been fully considered but they are not persuasive.

Applicants argue that Santiago et al fails to teach a mat protection element comprising a protrusion extending outwardly from the mat protection element contacting the shell. Such contention is not persuasive as Santiago et al teaches each and every element recited in instant claims and therefore meet the claims as set forth in the rejection above.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1764

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abthoff et al is cited for showing state of the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Hien Tran*

HT  
October 8, 2004

**Hien Tran**  
**Primary Examiner**  
**Art Unit 1764**